EY12827 (NEI)
SOURCE: MOLECULAR VISION, (2001 May 8) 7 107-13.
Journal code: CWP; 9605351. ISSN: 1090-0535.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200108
ENTRY DATE: Entered STN: 20010827
Last Updated on STN: 20010827
Entered Medline: 20010823

AB PURPOSE: Immortalized cell lines representing fibroblast cells from corneal stroma would facilitate studies of corneal cell biology and injury response. METHODS: **Primary cultures** of cells derived from mouse corneal stroma were transfected with a human telomerase reverse transcriptase (hTERT) expression construct to maximize chances of cellular immortalization. A resulting cell line was analyzed for telomerase activity, cell growth characteristics, senescence and gene expression patterns. Specific responses to transforming growth factor beta (TGF-beta) were also analyzed. RESULTS: An immortalized cell line was derived and was named MK/T-1. MK/T-1 cells show no signs of cellular senescence or transformation at over 100 passages. Telomerase activity was significantly higher in MK/T-1 cells as compared to the parental cell cultures. However, relative telomere length (RTL) in the MK/T-1 and parental cells was not significantly different. Senescence associated beta-galactosidase (SA-beta-Gal) activity was not detected in late passage MK/T-1 cells while the parental cells had already upregulated SA-beta-Gal at high levels by passage 9. The MK/T-1 cells express vimentin, tubulin, lumican, mimecan, decorin and collagen I, but not keratocan. Exposure of the MK/T-1 cells to TGF-beta induces the expression of smooth muscle alpha-actin (ASMA), the activation of MAP Kinase (p38-MAPK) and morphological changes consistent with cytoskeletal reorganization. CONCLUSIONS: MK/T-1 cells represent an immortalized **fibroblast cell line** derived using cultures from corneal stroma cell preparations. Expression of hTERT may contribute to immortalization of the MK/T-1 cells by a mechanism other than increases in RTL. MK/T-1 cells may be a useful model in which to study the responses of corneal fibroblast cells to cytokines and other diverse environmental factors in vitro.

L7 ANSWER 2 OF 26 MEDLINE
ACCESSION NUMBER: 2001178370 MEDLINE
DOCUMENT NUMBER: 21128069 PubMed ID: 11208523
TITLE: Excitability and contractility of skeletal muscle engineered from **primary cultures** and cell lines.
AUTHOR: Dennis R G; Kosnik P E 2nd; Gilbert M E; Faulkner J A
CORPORATE SOURCE: Muscle Mechanics Laboratory, Institute of Gerontology, University of Michigan, Ann Arbor 48109-2007, USA.. bobden@umich.edu
CONTRACT NUMBER: RO1-AG-06157 (NIA)
SOURCE: AMERICAN JOURNAL OF PHYSIOLOGY. CELL PHYSIOLOGY, (2001 Feb) 280 (2) C288-95.
Journal code: DKJ; 100901225. ISSN: 0363-6143.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010329

AB The purpose of this study was to compare the excitability and

contractility of three-dimensional skeletal muscle constructs, termed myooids, engineered from C2C12 myoblast and 10T1/2 **fibroblast cell lines**, primary muscle cultures from adult C3H mice, and neonatal and adult Sprague-Dawley rats. Myooids were 12 mm long, with